GE Oil & Gas

PGT25+G4

The latest in Aeroderivative Technology for On- and Offshore Mechanical Drive and Power Generation applications

- ■■■ Pipeline
- ■■■ LNG
- ■■□ Gas reinjection and storage
- ■■■ Offshore applications
- ■□□ Refinery & Petrochemical

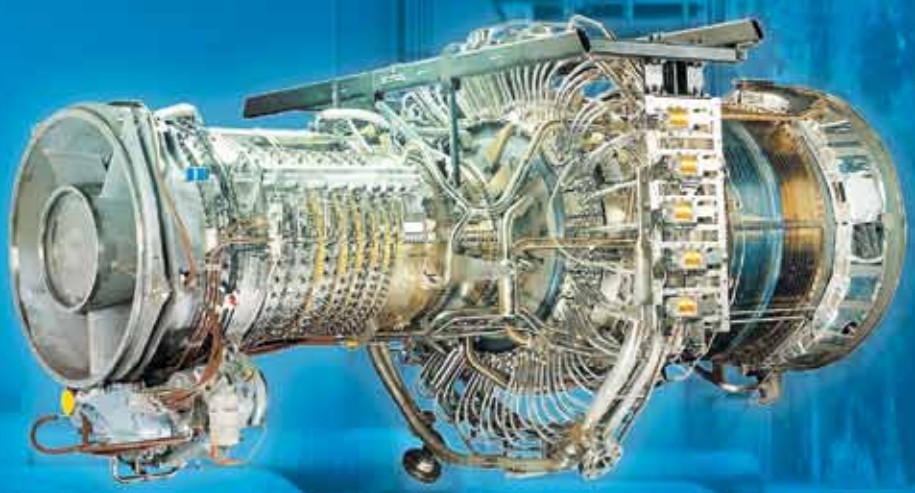
The **PGT25+G4** is a 34 MW gas turbine that draws its high efficiency and light weight from GE's aeroderivative technology and its ruggedness from heavy duty gas turbine designs. Its high reliability and availability are the result of its evolution from the proven LM2500+ and PGT25+ models, as well as advanced materials used in GE aircraft engines, and heavy duty gas turbine technology.

The gas generator is based on the LM2500+ with minor enhancements to increase the flow and temperature capabilities, while the power turbine is a 6100 RPM machine proven in the PGT25+ and capable of direct coupling to the driven equipment for simplicity and improved efficiency and maintenance. The annular combustor is that of the LM2500+ with slight modifications to impart higher firing temperature capability, reduce the maintenance cycle time, and keep NOx at LM2500+ levels even at higher firing temperatures.

The enhanced PGT25+G4 package offers improved integration of auxiliaries, reduced installation and commissioning time, and easy maintenability. Upgrade kits are also available for the the installed base of PGT25+ units to increase output power by 10%.

Key characteristics

- 34 MW output power & high efficiency from minor enhancements of proven technology
- High reliability & availability traced to LM2500+ and PGT25+ legacy designs
- Fuel flexibility – natural gas, ethane, syngas, medium BTU gas, liquid fuel, dual fuel (natural gas or liquid)
- Low emissions; DLE with gas or dual fuel



Applying proven, advanced technologies to deliver greater value

Gas Generator

The PGT25+G4 gas generator is based on the proven LM2500+ upgraded for increased flow. The limited design changes include:

- Minor blade and stationary vane airfoil modifications for increased flow
- Minor blade cooling improvements and material upgrades proven in aircraft engines for higher temperature capability
- Adjustment of compressor discharge seal area for optimum rotor thrust balance
- Combustor upgrades for DLE applications to reduce maintenance downtime

The frames, HP compressor front and aft cases, sump hardware, and main shaft bearing configuration all remain unchanged.

Power Turbine

The power turbine design is that of the PGT25+ and applies additional cooling technology based on GE's heavy duty gas turbine experience for higher HSPT reliability. Its features include:

- Aerodynamic blading design for high efficiency at both design point and reduced speed
- 6100 RPM shaft speed for direct coupling with driven equipment for simplicity, and enhanced plant efficiency and reliability
- Cartridge philosophy extends maintenance intervals, cuts costs and increases availability
- Optimized cooling flows and the latest generation of seals increase component life and maintains efficiency at its peak

GENERAL SPECIFICATIONS

- Output Power (nat. gas) 34 MW
- Efficiency (DLE) 41%@ iso cond.

Compressor

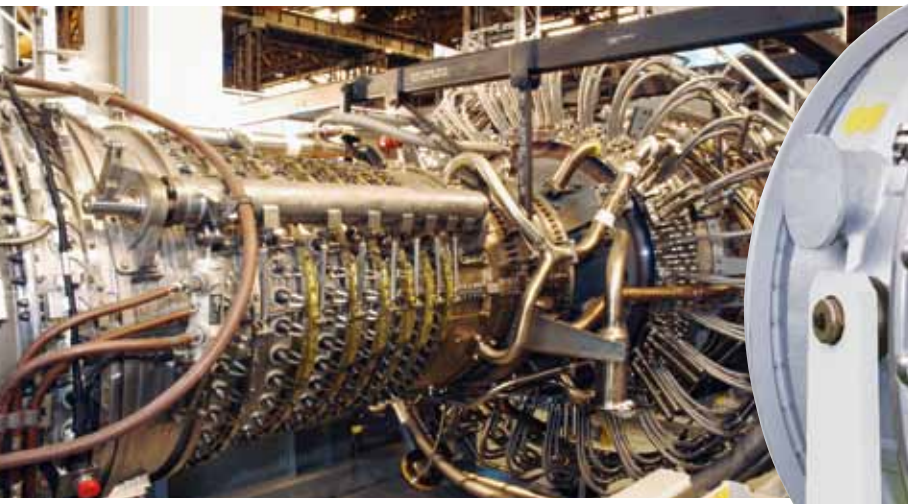
- 17-stage axial flow
- Inlet guide vanes & adjustable stator vanes on first 7 stages
- Pressure ratio 24:1

Combustion & Emission Control

- Single annular combustion chamber
- Dry Low Emission (DLE) system
- 25 ppm NOx (natural gas)

Turbine

- Two-stage HPT
- Two-stage HSPT (6100 RPM)



GE imagination at work

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